

DANIEL C. WYCHGRAM

IBLA 90-19

Decided September 17, 1990

Appeal from a decision of the Acting Deputy State Director, Wyoming State Office, Bureau of Land Management, affirming in part and reversing in part a decision of the Great Divide Resource Area Manager requiring the plugging of a well on an expired oil and gas lease. W-87410; S DR No. Wy-89-24.

Affirmed.

1. Oil and Gas Leases: Generally

The regulation at 43 CFR 3162.3-4(a) requires that the plugging and abandonment of an oil and gas well be conducted in accordance with a plan first approved in writing or prescribed by the authorized officer. BLM is not required to accept, as final plugging and abandonment, operations which were conducted without its approval and without an opportunity to witness and ascertain the integrity of the work.

2. Administrative Procedure: Burden of Proof--Appeals: Generally--Evidence: Burden of Proof--Oil and Gas Leases: Generally--Rules of Practice: Appeals: Burden of Proof

The burden is on the lessee/operator to establish that the plugging and abandonment of an oil and gas well has been conducted in accordance with a written plan first approved in writing or prescribed by the authorized officer, as required by regulation 43 CFR 3152.3-4(a). Where the record establishes that the Secretary's technical experts have evaluated unapproved plugging and abandonment work performed by an operator and have found such work deficient, the Secretary is entitled to rely on their professional opinion, absent a showing of error by a preponderance of the evidence.

APPEARANCES: Daniel C. Wychgram, Thermopolis, Wyoming, pro se; Lowell L. Madsen, Esq., Office of the Regional Solicitor, U.S. Department of the Interior, Denver, Colorado, for the Bureau of Land Management.

## OPINION BY ADMINISTRATIVE JUDGE KELLY

Daniel C. Wychgram has appealed a September 14, 1989, decision of the Acting Deputy State Director, Wyoming State Office, Bureau of Land Management (BLM), affirming in part and reversing in part a decision of the Great Divide Resource Area Officer, requiring the performance of specific plugging operations on Well No. Federal 1-33 on expired oil and gas lease W-87410. 1/

Factual Background

Well No. Federal 1-33 was drilled during March 1985. An Application for Permit to Drill (APD), approved January 9, 1985, 2/ proposed the following plugging specifications if the well were found not productive: a 50-foot plug across the Steele Sand; a 200-foot plug across the Shannon Sand; a 110-foot plug across the surface casing shoe; and a 10-sack plug at the surface. 3/ Paragraph 3 of "Conditions of Approval for Application for Permit to Drill," required that "no well will be plugged \* \* \* without prior approval of the BLM," that a "Notice of Intention to Abandon" was required to be filed within 15 days after an oral request to abandon was granted, and that unless plugging was "to take place immediately upon receipt of oral approval, the Chief, Branch of Inspection/Enforcement must be notified at least 48 hours in advance of the plugging of the well in order that a representative may witness plugging operations." Paragraph 15 stated as follows: "If the well is found to be nonproductive the plugging procedure is okay. We will require a Sundry Notice documenting your request for approval to abandon."

Appellant filed three separate sundry notices on March 13, 1985. In one of these, he requested permission to move the location, increase location size, and change the size of the surface casing. In a second, he reported that plugs had already been set from 2,450-2,250 feet and 1,600-1,000 feet, and that 21 joints of casing had been run to 846.74 feet. These plugs covered the Steele Sand and Shannon Sand, respectively. These two notices were approved by the Acting District Manager (DM), Rawlins District, on March 26, 1985. In the third sundry notice of March 13, 1985, appellant requested permission to perforate the 4-1/2-inch casing at 720-716-foot

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1/ Competitive public domain oil and gas lease W-87410 was issued as of Dec. 1, 1983, and embraced 280 acres in sec. 33, T. 27 N., R. 89 W., sixth principal meridian, Carbon County, Wyoming.

2/ The approval date is erroneously stated as Jan. 9, 1984.

3/ The "Shannon Sand" is a geologic formation at a depth of approximately 1,600 to 1,000 feet. The record shows that this structure is used by the Northern Utilities Co. (NUC) to store natural gas and is called the "Bunker Hill storage reservoir." As drilling a well through the Shannon Sand could allow gas to escape from the Bunker Hill reservoir through the well, it was agreed in March 1985 that appellant would not explore the Shannon Sand. Further, this possibility accounts for BLM's concern (evident throughout this matter) that the well be properly plugged before the well is permanently abandoned.

The "Steele Sand" is a structure described by appellant to be at a depth of approximately 2,400 feet.

level, test the formation at that level, set a temporary plug, and suspend the well. On April 3, 1985, the Acting DM approved this sundry notice subject to stipulations as follows:

Temporary plug - A bridge plug will be set as close as practical above the open perforations. Plug will be capped with a minimum of 5 sacks cement. Surface plugs will also consist of 5 sacks in 4.5 inch casing string. Well can be shut in for a period of 90 days. After 90 days please submit future plans. The BLM will not grant a suspension of operations and/or production. [Emphasis supplied.]

Thus, future activity was contemplated by BLM when it approved suspension of the well.

By letter of July 16, 1985, the DM notified appellant that no information regarding the future status of the well had been received and requested appellant to submit the required plans, pursuant to 43 CFR 3162.4-1 within 30 days of receipt of the letter. 4/

By letter dated August 1, 1985, appellant notified BLM that the lease owners had decided to temporarily abandon the well, leaving open the option to test at some future date. Appellant proposed reclaiming the site, subject to BLM's recommendations.

On August 12, 1985, the DM approved temporary abandonment (TA) for 1 year, effective April 3, 1985. The DM requested appellant to complete certain security work by August 20, 1985, and to file a sundry notice by April 3, 1986, indicating his future plans for the well. Thus, BLM again indicated that further action would be required before the well was abandoned.

On June 4, 1986, appellant filed a sundry notice requesting continu-ance of the TA status. Appellant advised BLM that he intended to conduct a seismic survey to gain further knowledge of the structure. Depending on the results of this survey, appellant indicated he might re-enter the well and test the Sussex Formation or stake a second location. On June 23, 1986, BLM approved this sundry notice and extended the TA status to April 3, 1987.

On October 13, 1987, the Area Manager, Great Divide Resource Area, wrote appellant in part as follows:

Effective April 3, 1987 the [Well No. Federal 1-33] is no longer in a temporarily abandoned (TA) status. \* \* \*

It is our opinion that this well is not a paying well. Lease W-87410 is set to expire on November 30, 1988. In its present condition the Federal 1-33 will not extend your lease

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4/ 43 CFR 3162.4-1 requires an operator to keep accurate records of all lease operations including abandonment, and to furnish such records to the authorized officer upon request.

beyond its primary term. We encourage you to rework the well in order to establish production in paying quantities prior to December 1988. If reworking the well is not in your future, please submit your plans to permanently plug and abandon.

In any event, please submit your plans on Form 3160-5 [sundry notice] within 30 days of receipt of this letter. [Emphasis supplied.]

Here, too, BLM's letter clearly indicated that a plan for abandoning the well had yet to be determined.

On November 16, 1987, appellant filed a sundry notice proposing recontouring and seeding of the drill site and alluding to "completed operations," including the setting of plugs at the Steele and Shannon Sands in March 1985. On January 12, 1988, the Acting Area Manager, Great Divide Resource Area, approved this sundry notice subject to certain reclamation stipulations and three engineering stipulations as follows:

Engineering stipulations

- a. A 100 foot cement plug is required at the surface inside the 4 1/2 inch production casing.
- b. Determine if cement fillup outside 4 1/2 inch casing extends 100 feet inside 7 inch surface casing. If so, do nothing; if not, a 100 foot cement plug is required in 4 1/2 X 7 inch casing annulus.
- c. Please notify this office 48 hours in advance of actual plugging operations.

In a January 31, 1988, letter to the Great Divide Resource Area Manager, appellant disputed the need for additional cement in the well casing and requested BLM to reconsider this stipulation.

By letter of February 12, 1988, the Area Manager instructed appellant to perform the following plugging program:

1. You will be required to test the integrity of the cement plug set at 1000 feet. If the integrity of the plug is in doubt, Wychgram will be required to set a 200 foot plug across the 4 1/2" production string shoe at 847 feet.
2. According to our records, per your sundry notice of March 13, 1985, the production string has been perforated at 716-720 feet. You will be required to place a 200 foot balanced plug from 650-850 feet.

Note: If the plug in step 2 is required, eliminate plug requirement in step 1. If the casing has not been perforated

and the integrity of the plug at 1000 feet is satisfactory, eliminate plug requirements in steps 1 and 2 and proceed with step 3.

3. In any event, a 100 foot cement plug is required at the surface inside the 4 1/2" casing.

4. Determine if cement fillup outside 4 1/2" casing extends inside 7" surface casing. If so, do nothing; if not, a 100 foot cement plug is required in 4 1/2" x 7" casing annulus.

Additional requirements:

9 lb/gal. fluid is required between all plugs.

All casing shall be cut off at the base of the cellar or 3 feet below final restored ground level.

A regulation abandonment marker shall contain the following information: operator name, lease number, well number, and legal location (1/4 1/4, section, township, range, county and state).

In a May 10, 1989, sundry notice appellant outlined his own proposed plugging operations for the well as follows:

- 1) Remove dry hole marker.
- 2) Cut surface casing below ground level, remove well head.
- 3) Enter exposed annulus between 9 5/8" and 4 1/2" casing with coiled tubing, hose or straight tubing.
- 4) If tubing contacts cement within upper 70 feet of 9 5/8" 4 1/2" annulus, retrieve tubing and proceed to step 7.
- 5) If cement is contacted between 70' and 100' depth in 9 5/8" 4 1/2" annulus, fill to 70' level with cement.
- 6) If cement is not contacted before the 100' level, pump in 33 cu. ft. of cement.
- 7) Enter 4 1/2" casing with coiled tubing, hose, or straight tubing to 100' depth.
- 8) Pump in 9 cu. ft. of cement.
- 9) In stall 4 1/2" dry hole marker onto 4 1/2" casing stub.
- 10) Recontour drillsite to conform with original topography using stockpiled vegetation and soil material.
- 11) Seed the disturbed areas of drillsite with certified seed consisting of a 50/50 blend of western wheatgrass and thickspike wheatgrass.

By letter of May 16, 1989, the Area Manager advised that BLM did not concur with the proposed procedure and returned the notice unapproved. He noted that, since the well was located adjacent to a gas storage unit, precautions must be taken to ensure that the Shannon was protected. 5/ To protect the Shannon, he required the following procedures:

1. The existence and integrity of the plug set at 1000' shall be confirmed. If no plug is found or the integrity of the plug is in doubt, a new plug across the Shannon shall be set.

2. A 200' plug must be set across the 4 1/2" production casing shoe at 847' (100' above and 100' below the shoe).

3. The cement top outside the 4 1/2" casing must be determined. If the top of cement is found not to extend up into the annular space between the 4 1/2" casing and 7" surface casing then the following must be done:

a) Perforate the 4 1/2" casing at 220' with 4 holes.

b) Circulate cement down the 4 1/2" casing and up the annular space between the 4 1/2" casing and 7" surface casing.

c) Once cement circulates to surface, stop pumps leaving cement inside and outside the 4 1/2" casing.

If the top of cement extends up into the annular space between the 4 1/2" casing and 7" casing then:

d) Set a 100' plug at surface (inside and outside the 4 1/2" casing).

4. 9+ 1b/gal fluid must be used between plugs.

5. All casing must be cut off at the base of the cellar or 3' below the restored ground level.

6. A regulation abandonment marker \* \* \* must be placed on the well.

By letter of June 13, 1989, appellant again took issue with these specifications, stressing that the cement plugs at 2,450-2,250 feet and 1,600-1,000 feet had already been "duly placed" on March 7, 1985, and exceeded approved specifications. Thereupon, the Area Manager issued his decision of June 22, 1989. In it, he referred to the conditions of approval of the APD requiring appellant to obtain "either verbal or written approval" prior to setting open hole plugs, and further providing that, if verbal approval were given, a "Notice of Intent" was required within 15 days following completion of the work. The Area Manager stated that

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5/ NUC used the Shannon sand as a gas storage reservoir (see note 3, supra).

BLM's records contained no notice from appellant regarding his intent to set the two plugs in March 1985, nor of BLM's approval being granted. He acknowledged that the plugs were set but refused "to accept these plugs as final abandonment plugs."

Next, the Area Manager explained the basis for his concern about the integrity of the existing plugs. He noted that "the Dowell Schlumberger work log \* \* \* indicates circulation was lost prior to cementing the 4 1/2 [inch] casing," and that, according to the daily drilling tour sheets, "a lost circulation zone is present at 904 [feet]." For this reason, he noted that it was highly likely that the plug fell down the hole, and that "[t]herefore, the existence and integrity of this plug is highly questionable and the plug must be tested." He noted further that "the top of the cement behind the 4 1/2 [inch] casing cannot be above 220 [feet] because of the lost circulation zone and the float not holding at the end of the job. Even without these things occurring calculations show the top of cement would be at 330 [feet]."

The Area Manager notified appellant that his bonding requirement remained at \$10,000. He noted that by letter of May 20, 1988, the Rawlins District Office had advised appellant that his bond would be reduced to \$3,500 if appellant posted a cash bond to cover reclamation, but that appellant had never posted a cash bond.

In conclusion, the Area Manager ordered appellant "to plug and abandon the well in accordance with the procedure outlined in the letter sent you dated May 16, 1989," within 30 days of receipt of his decision.

On July 19, 1989, appellant sought review by the State Director of the Area Manager's determination. While that review was pending, the Area Manager, on August 10, 1989, assessed appellant \$250 under 43 CFR 3163.1 for failure to comply with his June 22 order to plug the well within the time allowed.

In two August 28, 1989, letters to the State Director, appellant objected to the assessment and presented arguments against the plugging operations being required by BLM. Appellant requested that the time for plugging be set for spring 1990, and that he be permitted to post a \$3,500 cash bond.

#### Decision on Appeal

As noted earlier, the Acting Deputy State Director's (ADSD) September 14, 1989, decision partially affirmed and partially reversed the Great Divide Resource Area Manager's June 22, 1989, decision, and ordered performance of specified plugging and wellsite rehabilitation operations.

With respect to the penalty, the ADSD ruled that the \$250 assessment was inappropriate because the June 22 order to plug the well was an order to conduct an operation and not to correct a violation. He held, therefore, that appellant should have been issued a notice of violation for failure to comply with the order of an authorized officer under 43 CFR 3162.1(a).

Next, the ADSD denied appellant's request to set final plugging for spring 1990. He also denied appellant's request to post a \$3,500 bond for the reason that "the work needed to test the Shannon sand plug and properly set the other plugs, and to rehabilitate the location" would exceed that amount.

The ADSD's decision recites the following independent technical appraisal of appellant's plugging operations by state office personnel:

We recalculated estimates of the tops of the two plugs in place and the estimated top of the cement job around the 4 1/2" casing. We used the caliper log instead of "nominal" hole dimensions as you apparently used for all calculations. We estimate that the top of the bottom-hole plug is about 14 feet below the depth stated in the Sundry Notices and letters. The top of the plug across the Shannon Sand calculates at about 46 feet below the depth stated in the Sundry Notices. The top of the cement job behind the 4 1/2" casing calculates at about the 323-foot level, presuming the lost circulation zone at the 904-foot level did not take any fluid under the pressure of the cement pumps. Our estimate of the top of the casing cement job is in the same ballpark as the estimates provided with the June 22, 1989, letter.

(Decision at 6).

The ADSD acknowledged that the Area Manager had "escalated" the "plugging programs approved," but ruled that not all of the "escalations" were unwarranted. The ADSD noted that up until April 6, 1989, the plug-ging programs had failed to recognize "the importance of protecting the integrity of the Shannon Sand." The ADSD affirmed the additional plugging specification stated in the Area Manager's May 16, 1989, letter, to the effect that a new Shannon Sand plug would have to be set if the existing plug were to be found unsound.

The ADSD stated that, since appellant had "failed to file a Sundry Notice (or make an oral request) for permission to set the bottom two plugs and set the 4 1/2 [inch] casing to the 847 foot level" BLM was denied the opportunity "to witness or require testing of the Shannon Sand plug." He ruled that the testing of the Shannon Sand plug was imperative, and that if its integrity were found to be doubtful, a new plug would have to be set "to extend from at least 50 feet below to 50 feet above the Shannon Sand" and tagged to assure its competence. The ADSD also required the setting of a plug "at least 50 feet below to 50 feet above the shoe of the 4 1/2 [inch] casing." He prescribed a "minimum 50-foot plug \* \* \* set at the surface in the 4 1/2 [inch] casing and in the 7 [inch] x 4 1/2 [inch] annulus." He also confirmed the necessity of requirements 4, 5, and 6 set out in the Area Manager's May 16, 1989, letter (quoted supra). The ADSD characterized the above specifications as "minimum standards" based on the requirements of Onshore Oil and Gas Order No. 2 (53 FR 46798 (Nov. 18, 1988)). He required the plugging operations to be completed within 30 days of appellant's receipt of the decision.



Appealing the decision, appellant requested that the performance order be stayed pending appeal. Pursuant to a Board order dated November 8, 1989, the parties briefed the issue of whether a stay should be granted. In its response, BLM requested that the Board expedite consideration of the appeal.

After an initial review of the record we concluded that a reasonable doubt existed as to the integrity of the plug across the Shannon Sand. We found that in the event of leakage, the liability of the Government would be substantial and appellant's existing bond would not be adequate. Accordingly, by order dated March 26, 1990, we denied appellant's request for a stay pending appeal. We also found, given the potential for irreparable damage, that expedited consideration was justified. 6/

### Appellant's Arguments

Referring to the APD approved January 9, 1985, and paragraph 15 of "Conditions for Approval of Application for Permit to Drill," appellant contends that BLM had full knowledge and granted full approval before and after setting of plug #2." Plug #2 is described as the plug between 1,600 and 1,000 feet in one of the March 13, 1985, sundry notices, and, thus, is designed to prevent leakage from the Shannon formation through the well drilled by appellant. Appellant asserts that a notice of intent to abandon was not required "because a production string of casing had been cemented in place in anticipation of establishing production from the Sussex Formation and no plans for abandonment existed at that time." Appellant further contends that BLM's Petroleum Engineer Michael Madrid orally approved appellant's plugging program in a telephone call of March 6, 1985, 11 hours before the plugging operation was accomplished, between 4:30 and 7:15 a.m. on March 7 (Statement of Reasons (SOR) at 4; Appellant's Exh. IB3). Appellant also alleges that a BLM official was on the site, some hours after completion of work. Appellant contends that BLM should be bound by its acceptance of the plugging operations signified by its approval of the March 13, 1985, sundry notice describing those operations. Appellant points out that those operations were again approved by the BLM in the sundry notice dated November 13, 1987.

Appellant also contends that his "plug #2" more than meets BLM's initial specifications and is in all other respects adequate. Appellant

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6/ In a letter to the Board dated Apr. 25, 1990, appellant expressed concern that the Board's order of Mar. 26, 1990, amounted to a denial of his appeal rights. Our order was issued subsequent to briefing by the parties and in accordance with 43 CFR 3165.4(c), which authorizes the Board to determine whether a performance order will or will not be detrimental to the interests of the lessor. Recognizing the urgency of the circumstances, we granted expedited consideration, as we did in Coleman Oil & Gas Inc., 104 IBLA 363 (1988), which also involved plugging and abandonment. The present decision is the result of our full review of the merits of the appeal. Thus, appellant's appeal rights have in no way been denied by our order of Mar. 26, 1990.

We are unaware whether appellant has proceeded to obey the ADSD's decision, which was left in effect by our Mar. 26, 1990, order.

asserts that all plugging and abandonment specifications required by BLM after the November 13, 1987, sundry notice were improper. In support of his contention that the work in place is adequate appellant has submitted a number of documents. One of these is an invoice of Dowell Schlumberger Inc. (Appellant's Exh. IIA1), for the plugging and casing work performed on March 7, 1985, and described in the pertinent March 13, 1985, sundry notice. Another is a cementing service report supplement log relating to the same work (Appellant's Exh. IIA2). Appellant also submitted letters from two Dowell Schlumberger officials summarizing and commenting on the work performed. One of these letters, dated November 25, 1989, is from T. H. Evans, who according to the SOR, supervised cementing operations at the well on March 7, 1985 (SOR at 3; Appellant's Exh. IB4). The letter is in response to certain inquiries by appellant concerning the work completed on that day and the feasibility of performing the additional work on the well demanded by BLM. The letter confirms BLM's statement that there was a problem with lost circulation "as stated in the service log," and notes that the mud was "very viscous."

Appellant contends that the plug across the Shannon Sand "is at least 300 feet in excess of the approved plug's dimension of 200 [feet]" (SOR at 6). Appellant contends that all plugging and abandonment requirements beyond those stated in the conditions for approval of the November 13, 1987, sundry notice are excessive.

Appellant disputes the concern in the Area Manager's June 22, 1989, decision that lost circulation could affect the integrity of the plug. Appellant asserts that the perforation and cement-pumping requirements stated in the Area Manager's May 16, 1989, letter are not feasible and "would most likely result in fracturing the formation or damaging the equipment" (SOR at 7).

Appellant has renewed his request that he be allowed to post a \$3,550 cash or certificate of deposit bond.

#### BLM's Arguments

In a response to the SOR, the Wyoming State Director (SD) asserts that the approval of the plugging operations specified in the APD was conditioned on the filing of a sundry notice, documenting appellant's request to abandon the well. The SD states that appellant's action in March 1985 "was not to plug the well but to plug back and set casing to a formation that was not a target of the approved APD." The SD states that no advance permission was ever requested or granted for setting the plugs.

In a deposition dated December 13, 1989, and submitted as part of BLM's answer, BLM petroleum engineer Michael Madrid states that he does not recall a telephone conversation on March 6, 1985, with anyone concern-ing the plugging of Well No. Federal 1-33.

A deposition dated December 19, 1989, was also submitted by BLM's Larry Kmoch, who was Chief, Branch of Inspection and Enforcement, and supervised BLM's petroleum engineering technicians when the APD was filed. Kmoch denies that BLM was notified in advance of appellant's intent to plug

the well or that any BLM technician was onsite to witness plugging operations. Kmoch explains that if BLM inspectors had been present, they would have required testing of the critical plug over the Shannon formation at that time, and testing would have been noted on the driller's log. BLM inspectors would have monitored casing being placed in the hole and would have verified calculations as to cement quantities and fluids. Kmoch interprets BLM's signing of the November 1987 sundry notice describing completed operation as "receipt of the form and approval of the program if completed successfully in the manner stated." (Emphasis in original.) According to Kmoch, even though it approves a sundry notice, BLM retains the right to subsequently ascertain and assure itself of the integrity of the work performed.

In an affidavit dated December 19, 1989, and submitted as part of BLM's answer, petroleum engineer David C. Moore offers the following appraisal of appellant's plugging operations:

The cement plug, plug no. 2, in question was set under mud and hole conditions conducive to mud contamination of the plug. According to tour sheets, there is no indication that the well was circulated for nearly 24 hours, following logging operations, prior to commencing logging operations. \* \* \* Dowell Schlumberger's work log indicates the mud to be very viscous. A mud check report (dated 3-6-89, time 9:30 a.m.) indicates the mud properties were viscosity 85+, plastic viscosity 60 cp and yield point 50 lbs/ 100 sq ft. These properties are way too high.

Therefore, the condition of the mud and the presence of the lost circulation zone 904' places the integrity of the cement plug in doubt and in the BLM's opinion should be tested to ensure the integrity of the plug.

\* \* \* \* \*

To properly abandon a well a cement plug is required to be placed in the annular space, between the production casing (if left in the hole) and the surface casing shoe. The common industry practice, especially when shallow surface casing strings are used, is to perforate the production casing below the surface casing shoe and circulate cement leaving the required length cement plug inside and outside.

The cement top behind the 4 1/2" production casing in the Wychgram 1-33 is calculated to be at a depth of 323' to 332' (no cement bond log was run). The 7" surface casing was set at a depth of 170'. Therefore it would not be possible to have cement in the annulus between the surface casing and production casing under normal cementing conditions. But Dowell Schlumberger's work log indicates circulation was lost at the start of the cementing job for the 4 1/2" production casing. Thus it is highly possible the cement top would be considerably deeper than the depth calculated. In order to definitely determine the cement top a cement bond log would need to be run in the

well. It remains the opinion of the BLM that no cement is present in the annulus between the surface casing and production casing.

### Discussion

[1] The regulation at 43 CFR 3162.3-4(a) provides that "[t]he operator shall promptly plug and abandon, in accordance with a plan first approved in writing or prescribed by the authorized officer, each newly completed or recompleted well in which oil or gas is not encountered in paying quantities \* \* \*." Onshore Oil and Gas Order No. 2 provides in part as follows:

#### G. Drilling Abandonment Requirements

\* \* \* Approval shall be obtained prior to the commencement of abandonment. All formations bearing usable quality water, oil, gas, or geothermal resources, and/or a prospectively valuable deposit of minerals shall be protected. Approval may be given orally by the authorized officer before abandonment operations are initiated. This oral request and approval shall be followed by a written notice of intent to abandon filed not later than the fifth business day following oral approval.

53 FR 46810 (Nov. 8, 1988). Thus, the first issue is whether BLM received notice of, and approved, appellant's March 7, 1985, work as a plugging and abandonment of the well.

The gist of appellant's position on appeal is that BLM signified its acceptance and should be bound by its approval of the work reported in the pertinent March 13, 1985, sundry notice, as a satisfactory plugging and abandonment of Well No. Federal 1-33. The record does not indicate that appellant ever performed additional plugging and abandonment operations.

As appellant observes in his SOR, no plans for abandonment existed when the plugs were set in March 1985. On the contrary, appellant anticipated production from the Sussex formation. Therefore, as appellant correctly contends, the notice requirements for abandonment were inapplicable at that time. However, without notice of abandonment, BLM could not have approved work performed to that end. Thus, BLM's approval of the pertinent March 13, 1985, sundry notices could not have constituted approval of the work described therein as "final plugging and abandonment." As noted earlier, approval of the November 13, 1987, notice, which described the same work reported in the March 13, 1985, notice, was conditioned on several plugging specifications yet to be performed and on notice being provided to BLM 48 hours in advance of operations. Thus, BLM's approval of the November 13, 1987, sundry notice also did not constitute approval of the work already performed as final plugging and abandonment. <sup>7/</sup>

Regulation 43 CFR 3162.3-4(a) and Onshore Oil and Gas Order No. 2 prescribe a clear procedural scenario for abandonment. Plugging and

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<sup>7/</sup> Since BLM approval of the sundry notices is a matter of record, it is immaterial whether oral approval was also given.

abandonment is to occur "promptly" and "in accordance with a plan first approved in writing or prescribed by the authorized officer." (Emphasis supplied.) See, e.g., Coleman Oil & Gas, Inc., 104 IBLA 363, 365 (1988). The order provides that a written notice of intent to abandon must be filed no later than the fifth business day following oral approval. In the case before us the "Conditions" attached to the APD specifically required the filing of a "Notice of Intention to Abandon" within 15 days after an oral request to abandon was granted. It also requires a 48-hour notice to the Chief, Branch of Inspection/Enforcement, in order that a BLM representative might witness plugging operations. Clearly, the intent of these guidelines is to allow the Government an opportunity to evaluate proposals for plugging and abandonment before they are carried out. Failing such notice, there is no proviso compelling the Government to ratify work which has been completed without its approval or supervision.

Appellant's first notice to BLM of an intent to abandon is his letter of August 1, 1985, advising the DM that the lease owners had decided to temporarily abandon the well. Thus, it is only subsequent to August 1, 1985, that BLM could have approved or rejected a plan for abandonment submitted by appellant, and could have sent an engineer to witness the carrying out of such a plan. But by that time, the plugging had been completed.

The references to abandonment and plugging specifications in the APD and "Conditions" were informational in nature. They were furnished to appellant by BLM before the well was drilled, were contingent on conditions encountered, and therefore cannot reasonably be construed as satisfying an approved abandonment plan under 43 CFR 3162.3-4(a).

Though requested to do so by BLM in October 1987 (when it became clear that the well was being abandoned), appellant did not submit a plan for abandonment until May 1989. Prior thereto, BLM repeatedly required appellant to perform plugging and abandonment according to the specifications listed in the November 13, 1987, sundry notice (conditions of approval), and the acting Area Manager's letters of January 13, and February 12, 1988. BLM's February 12, 1988, letter was followed by appellant's counterproposal in the May 10, 1989, sundry notice. That counterproposal was rejected, and additional requirements stated, in the Area Manager's letter of May 16, 1989. Thus, the record contains no proposal for abandonment submitted by appellant and approved by the authorized officer.

We conclude that appellant failed to satisfy the notice requirement in 43 CFR 3162.3-4(a) and in the conditions of the APD with respect to the work completed on March 7, 1985, and that BLM did not approve that work as final plugging and abandonment of the well.

[2] The second issue is whether BLM properly required appellant to perform plugging and abandonment operations according to the specifications stated and incorporated by reference in the ADSD's September 14, 1989, decision. To resolve that issue we must determine whether the record and applicable rules or regulations support those requirements. The ultimate burden of establishing compliance with the plugging and abandonment requirements of a plan approved in writing or prescribed by the authorized

officer (43 CFR 3162.3-4(a)) is on appellant. Coleman Oil & Gas, Inc., *supra* at 366. In order to prevail, appellant must show by a preponderance of the evidence that BLM's requirements were excessive. Proof by a preponderance of the evidence is the traditional standard required in a civil or administrative proceeding. Bender v. Clark, 744 F.2d 1424, 1429 (10th Cir. 1984). The "preponderance of the evidence" standard has been defined as:

[Establishing] \* \* \* that something is more likely so than not so; in other words, the "preponderance of the evidence" means such evidence, when considered and compared with that opposed to it, [that] has [the] more convincing force and produces in your [mind the] belief that what is sought to be proved is more likely to be true than not true.

Thunderbird Oil Corp., 91 IBLA 195, 201 (1986), *aff'd*, *sub nom.*, Planet Corp. v. Hodel, CV No. 86-679 HB (D.N.M. May 6, 1987), *quoting* South-East Coal Co. v. Consolidation Coal Co., 434 F.2d 767, 778 (6th Cir. 1970).

Two documents in the record amply support BLM's interest in wishing to protect the Shannon Sand. One is the "Drilling Plan, #1-33 Federal - Wychgram," signed by appellant on August 9, 1984. It describes the Shannon Sand as approximately 125 feet thick and "currently used as a gas storage reservoir." The second document is a March 1, 1985, letter to appellant by the Vice President of Northern Utilities, Inc., stating in part as follows:

We refuse to give you permission to test within the Shannon formation of our Bunker Hill Storage Reservoir for which we have prior rights by virtue of our "Agreement for Subsurface Storage of Gas in the Shannon Formation" Bunker Hill Field, Carbon County, Wyoming No. 14-08-0001-12426 of July 1, 1972 with the United States of America through the Secretary of the Interior.

As concerns your plans to tests zones below the Shannon Formation, we will require [that you] protect our prior interest, that you hold us harmless, and that you indemnify us against any loss of any nature whatsoever arising from or out of your testing of the deeper formations. Should gas be found in any part of the Shannon Formation it shall be presumed that it is owned by us and the burden of proof will be on you to show that the gas is not from our storage formation. Should there be a completion in any zone other than the Shannon, it shall not produce our storage gas or damage the storage reservoir or wells. If the well is abandoned for any reason, that well shall be plugged in a manner so as to prevent any damage to our storage reservoir wells.

The letter bears appellant's signature, attesting his agreement to its terms. It demonstrates that BLM's concerns with protecting the Shannon Formation are well founded.

The reasons for the work required of appellant are concisely explained in the December 19, 1989, Moore affidavit (quoted extensively above). Having evaluated the work in place by utilizing worklogs of appellant's contractor, BLM's engineers concluded that the integrity of certain work was

in doubt and developed specifications for operations necessary to allay those doubts. Appellant's own documents, specifically the T. H. Evans letter, show that there was a problem with circulation. 8/ Appellant concedes such a problem but minimizes its importance. BLM's engineers, however, state that because of lost circulation and the high viscosity of the mud, the integrity of "plug No. 2" is in doubt and requires testing. The Moore affidavit also explains the effect of lack of circulation on the cement top behind the 4-1/2-inch production casing, including the uncertainty of its location. Appellant has presented no data to refute BLM's findings. Appellant's disagreements with those findings do not render them invalid. As we have often held in cases involving differing interpretations of the same geological data, the Secretary is entitled to rely on the reasoned opinions and conclusions of his technical expert in the field. See Harry Ptasynski, 107 IBLA 197, 202 (1989); Celeste C. Grynberg, 107 IBLA 143, 149 (1989); and cases there cited. See also Mallon Oil Co., 107 IBLA 150 (1989) (holding that the Secretary is entitled to rely on the opinion of his experts regarding the volume of gas avoidably lost by an operator, in the absence of a showing by a preponderance of the evidence that such opinion is erroneous).

Appellant argues that final plugging and abandonment should be governed by the specifications attached as conditions to the approved sundry notice of November 13, 1987. 9/ The thrust of the ADSD's decision is that the specifications as finally required are minimum and conform to Oil and Gas order No. 2, the text of which appears at 53 FR 46804 (Nov. 18, 1988). Among the standards listed in the order are detailed specifications for cementing open and cased holes, and minimum cementing requirements for annular space and surface plugs. Appellant has not convinced us that the plugging and abandonment specifications required in the decision appealed from are unduly stringent or depart in any way from those stated in the order. As the ADSD pointed out in his decision, lack of notice deprived BLM of the opportunity to "witness and test" appellant's plugging operations. BLM is not required to accept appellant's work on faith. In fact, it would be remiss in its responsibilities were it to do so. We conclude that BLM properly required performance of plugging and abandonment operations according to the specifications stated and incorporated by reference in the decision appealed from. 10/

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8/ The Dowell Schlumberger invoice and the cementing service report describe the work performed. However, they are not, as appellant contends, probative of its quality.

9/ According to the record, appellant disagreed with those specifications in part, when they were issued. By letter to the Great Divide Resource Area Manager dated Jan. 31, 1988, appellant requested reconsideration of "the stipulation requiring the cement plug." In a letter to the State Director dated Aug. 28, 1989, appellant stated that he now agreed with BLM's engineering specifications attached as conditions to the sundry notice of Nov. 13, 1987. However, appellant never performed any of the work requested by BLM. Therefore, he was not prejudiced by any change in plugging specifications.

10/ Appellant submitted statements from two petroleum engineers to support his argument that his procedures for setting the plug are consistent with industry practice. The issue in this case is not whether appellant's

Finally, appellant has renewed his request, denied in the decision appealed from, that he be allowed to post a \$3,500 bond. By letter of May 20, 1988, BLM had initially notified appellant that it "will release [your] Allied [Fidelity] bond if you will post a \$3,500 cash bond to cover the reclamation." However, appellant never posted such a bond. The ADSD denied the request in September 1989 for the stated reason that the remedial plugging and abandonment work and the work necessary for site rehabilitation would exceed the "expenses that prompted the May 20, 1988, decision." In our order of March 26, 1990, we found that bonding was inadequate to indemnify the Federal Government. Appellant has proffered no arguments to dispute either the ADSD's conclusion, or that reached in our order. Accordingly, the ADSD properly denied appellant's request to post the bond.

To the extent not discussed herein, appellant's other arguments have been considered and rejected.

Therefore pursuant to the authority delegated to the Board of Land Appeals by the Secretary of the Interior, 43 CFR 4.1, the decision appealed from is affirmed.

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John H. Kelly  
Administrative Judge

I concur:

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David L. Hughes  
Administrative Judge

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fn. 10 (continued)  
procedures were in accord with industry practice. Rather, the issue is whether his procedures were in accord with BLM's specifications, and whether such specifications were reasonable under the circumstances of this case.